

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:

Andrew Z. FIRE *et al.*

U.S. Patent No.: 6,506,559

Application No.: 09/215,257

Filed: December 18, 1998

Issued: January 14, 2003

For: GENETIC INHIBITION BY
DOUBLE STRANDED RNA

PETITION UNDER 37 C.F.R. § 1.182
TO REPRINT THE FRONT PAGE
OF THE LETTERS PATENT

** Hand-Carry To Office Of Petitions
Crystal Plaza 4, Room 3-C23 **

Office of Petitions

Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED

JAN 22 2003

OFFICE OF PETITIONS

07/18/2003 AKELLEY 00000012 500310 6506559

01 FC:1460 130.00 DA
02 FC:1460 130.00 DA

This is a Petition under 37 C.F.R. § 1.182 to request that the front page of the attached original Letters Patent be corrected and reprinted to include the correct names of the assignees. Accompanying this petition is a second petition requesting that the rules under 37 CFR §3.81(a) be waived to permit the correct names of the assignees of the above-mentioned patent to be provided after issuance.

On October 22, 2002, Applicant's agent submitted two copies of Issue Fee Transmittal Form PTOL-85 noting the sole assignee as "Carnegie Institute of Washington." This assignee designation was erroneous in two respects:

- (1) A second assignment to "The University of Massachusetts" was recorded on March 19, 1999, at Reel/Frame 009825/0207 (copies of the Notice of Recordation and assignment documents are attached hereto); and
- (2) "Carnegie Institute of Washington" contains an inadvertent error in that the word "Institute" should actually be "Institution" (see copies of Notice of Recordation and assignment

attached hereto). Thus, the correct name of the first assignee should be “Carnegie Institution of Washington,” and “The University of Massachusetts” should be included on the face of the patent as the second assignee. As explained in the attached petition under 37 CFR §1.183, the error was inadvertent and due to high public interest, the Office should reprint the first page, particularly in view of patentee’s promptness in seeking the requested relief.

According to 37 CFR §1.182, all situations not specifically provided for in the regulations will be decided in accordance with the merits of each situation by or under the authority of the Commissioner. The Commissioner therefore has the authority to approve reprinting of the first page of the Letters Patent. While Applicant is aware that the original Letters Patent is reprinted only under very rare circumstances, as explained in the attached Petition under 37 CFR §1.183, justice requires that the correct assignees be named on the face of the patent in the present case.

The above-mentioned patent covers one of the most important inventions of the year, an invention that is jointly owned by Carnegie Institution of Washington and The University of Massachusetts. The importance of the invention is emphasized by several scientific articles submitted herewith and discussed in the accompanying petition under 37 CFR §1.183. Given the importance of the invention and the number of readers that will no doubt request a copy of the patent, it is only fair that both of the owners of this important invention are shown on the face of the patent. Listing the second assignee in a certificate of correction rather than on the face of the patent would not serve justice adequately, since the face of the patent would be viewed by potential readers much more frequently than a certificate attached to the patent. Failure to correct the face of the patent to reflect the names of both assignees would rob the second


assignee of its due recognition as a co-owner of the invention, an injustice that should not prevail solely because the Applicant's agent made an inadvertent error in completing the PTOL-85 form.

The \$130.00 petition fee required by 37 C.F.R. § 1.17(h) is being submitted with this Petition. The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Deposit Account 50-0310.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

RECEIVED
JAN 22 2003
OFFICE OF PETITIONS


Bonnie Weiss McLeod, Ph.D.
Reg. No. 43,255

January 22, 2003

CUSTOMER NO.: 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: 202-739-3000
Facsimile: 202-739-3001

Attachments:

- Petition under 37 CFR §1.183 to Waive the Rules under 37 CFR §3.81(a)
- Notice of Assignment recordation and assignment for University of Massachusetts
- Notice of Assignment recordation and assignment for Carnegie Inst. of Washington
- Letters Patent
- Journal article: Science, Dec. 2002, Vol. 298, pages 2296-97
- Journal article: excerpt from The Wall Street Journal, Tuesday, Aug. 6, 2002
- Journal article: Genetic Engineering News, Dec. 2002, Vol. 22(21), pages 1, 3, 70 & 80
- Meeting agenda, Applications of RNA Interference, Feb. 10-11, San Diego, CA

**RECORDATION FORM COVER SHEET
PATENT APPLICATIONS & PATENTS ONLY**

TO THE ASSISTANT COMMISSIONER OF PATENTS AND TRADEMARKS:
SIR: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. NAME OF CONVEYING PARTY(IES) (ASSIGNOR(S)):

1. Hiroaki Tabara
3. Craig C. Mello
5.
7.

2. Samuel E. Driver
4.
6.
8.

ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES ☒ NO

2. PARTY(IES) (ASSIGNEE(S)) RECEIVING INTEREST:

NAME: The University of Massachusetts

ADDRESS: One Beacon Street, Boston, Massachusetts 02108

ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED? ☐ YES ☒ NO

3. NATURE OF CONVEYANCE (DOCUMENT):

(Submit herewith only one document for recordation—multiple copies of same Assignment signed by different inventors is one document)

☐ ASSIGNMENT OF ☐ WHOLE ☐ PART INTEREST

☐ CHANGE OF NAME ☐ ACCURATE TRANSLATION
☐ SECURITY ☐ MERGER ☒ OTHER: CORRECTION

EXEC. DATE: 1st Inventor: February 19, 1999;
2nd Inventor: March 1, 1999; 3rd Inventor:
February 19, 1999

EXECUTION DATE(S) ON THE DECLARATION IF FILED HERewith: (**NOTE:** IF DATES ON DECLARATION AND ASSIGNMENT DIFFER SEE ATTY!)

4.5 APPL. NO.(S) OR PAT NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached? ☐ YES ☐ NO

A. PAT. APP. NO.(S) series code/serial no	M#	1 st INVENTOR if not in item 1	B. PATENT NO(S)	M#	1 st INVENTOR if not in item 1
09/215,257	256628				

5. Name & Address of Party to Whom Correspondence
Concerning Document Should be Mailed:

Pillsbury Madison & Sutro LLP
Intellectual Property Group
1100 NEW YORK AVENUE, N.W.
NINTH FLOOR, EAST TOWER
WASHINGTON, D.C. 20005-3918

6. NUMBER INVOLVED:
APPLNS 1 + PATS = TOTAL 1

7. AMOUNT OF FEE ENCLOSED: (Code 581)
ABOVE TOTAL x \$40 = \$40

5.5 ATTY DKT:

PMS 256628

8. IF ABOVE FEE IS MISSING OR INADEQUATE CHARGE
INSUFFICIENCY TO DEPOSIT ACCOUNT NUMBER: 03-3975

UNDER ORDER NO	20263	256628
dup. sheet not required	CLIENT NO.	MATTER NO.

9. STATEMENT AND SIGNATURE.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

07/02/1999 DMSUYEN 00000168 09215257

01 FC:581 *Paul N. Kokulis* 40.00 OP Reg No 43,180

10. Total number of pages including this
cover sheet, attachments and document
(do not file dup. Cover sheet)

12

Signature

Attorney: Paul N. Kokulis

Reg. No. 16773

Atty/Sec: PNK/kep

TEL: (202) 861-3503

Date: July 1, 1999

FAX: (202) 822-0944

FILE WITH PTO RETURN RECEIPT (PAT-103A)

BOX ASSIGNMENTS

1.1-16-1999

DO NOT USE FOR TRADEMARKS

TO THE ASSISTANT COMMISSIONER OF PATENT
SIR: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

101162969

1. NAME OF CONVEYING PARTY(IES) (ASSIGNORS(S)):

1. Hiroaki Tabara
3. Craig C. Mello
5.
7.

2. Samuel E. Driver
4.
6.
8.

ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES ☒ NO

2. PARTY(IES) (ASSIGNEE(S)) RECEIVING INTEREST:

NAME: The University of Massachusetts

ADDRESS: One Beacon Street, Boston, MA 02108

ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED? ☐ YES ☒ NO

3. NATURE OF CONVEYANCE (DOCUMENT):

(Submit herewith only one document for recordation—multiple copies of same Assignment signed by different inventors is one document)☒ ASSIGNMENT OF ☒ WHOLE ☐ PART INTEREST

EXEC. DATE: 2/19/99 & 3/1/99

☐ CHANGE OF NAME ☐ ACCURATE TRANSLATION
☐ SECURITY ☐ MERGER ☐ OTHER:

EXECUTION DATE(S) ON THE DECLARATION IF FILED HEREWITH: (NOTE: IF DATES ON DECLARATION AND ASSIGNMENT DIFFER SEE ATTY!)

4.5 APPL. NO.(S) OR PAT NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached? ☐ YES ☐ NO

A. PAT. APP. NO.(S) series code/serial no	M#	1 st INVENTOR if not in item 1	B. PATENT NO(S)	M#	1 st INVENTOR if not in item 1
09/215,257	256628	Fire et al.			

5. Name & Address of Party to Whom Correspondence
Concerning Document Should be Mailed:

Pillsbury Madison & Sutro LLP
Intellectual Property Group
1100 NEW YORK AVENUE, N.W.
NINTH FLOOR, EAST TOWER
WASHINGTON, D.C. 20005-3918

6. NUMBER INVOLVED:
APPLNS 1 + PATS ____ = TOTAL 17. AMOUNT OF FEE ENCLOSED: (Code 581)
ABOVE TOTAL x \$40 = \$40

5.5 ATTY DKT:

PMS 256628

8. IF ABOVE FEE IS MISSING OR INADEQUATE CHARGE
INSUFFICIENCY TO DEPOSIT ACCOUNT NUMBER: 03-3975
UNDER ORDER NO 20263 256628

MATTER NO.

CLIENT REF.

dup. sheet not required

CLIENT NO.

MATTER NO.

03/22/1999 DNGUYEN 00000275 09215257

01 FC:581 40.00 OP

9. STATEMENT AND SIGNATURE.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Gary Taniguchi Reg No 43,180
Signature

10. Total number of pages including this
cover sheet, attachments and document
(do not file dup. Cover sheet)

5

Attorney: Paul N. Kokulis

Reg. No. 16773

Atty/Sec: PNK/kep

TEL: (202) 861-3503

Date: March 19, 1999

FAX: (202) 822-0944

FILE WITH PTO RETURN RECEIPT (PAT-103A)

Please return signed/recorded to:
Pillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt.	PMS 256628	
	M#	Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Hiroaki Tabara
- 2) Samuel E. Driver
- 3) Craig C. Mello
- 4) _____

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;

☒ was filed on December 18, 1998, Appln. No. 09/215,257 ;

AND WHEREAS The University of Massachusetts (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the State of Massachusetts and having its
principal office and place of business at One Beacon Street, Boston, MA 02108, desires to acquire an interest
therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1) Hiroaki Tabara
田原 浩昭
Name: Hiroaki Tabara

2/19/99

x Maden
x

2) _____
Name: Samuel E. Driver

3) Craig C. Mello
Name: Craig C. Mello

2/19/99

+ CMS

4) _____
Name:

Please return signed/recorded to:
Pillbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt. PMS 256628
M#

Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Hiroaki Tabara
- 2) Samuel E. Driver
- 3) Craig C. Mello
- 4) _____

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;
- ☒ was filed on December 18, 1998, Appln. No. 09/ 215,257 ;

AND WHEREAS The University of Massachusetts (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the State of Massachusetts and having its
principal office and place of business at One Beacon Street, Boston, MA 02108, desires to acquire an interest
therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1)

Name: Hiroaki Tabara

2)

x Sam Driver
Name: Samuel E. Driver

x 3/1/99

x Elizabeth Robinson
x Amanda Smith

3)

Name: Craig C. Mello

A

4)

Name:

11-16-1999

DO NOT USE FOR TRADEMARKS



101163112

TO THE ASSISTANT COMMISSIONER

SIR: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. NAME OF CONVEYING PARTY(IES) (ASSIGNORS(S)):

1. Andrew Z. Fire

3. Mary K. Montgomery

5. Lisa Timmons

7.

2. Siqun Xu

4. Stephen A. Kostas

6.

8.

ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES ☒ NO

2. PARTY(IES) (ASSIGNEE(S)) RECEIVING INTEREST:

NAME: The Carnegie Institution of Washington

ADDRESS: 1530 P Street, N.W., Washington, D.C. 20005

ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED? ☐ YES ☒ NO

3. NATURE OF CONVEYANCE (DOCUMENT):

(Submit herewith only one document for recordation—multiple copies of same Assignment signed by different inventors is one document)☒ ASSIGNMENT OF ☒ WHOLE ☐ PART INTEREST

EXEC. DATE: 1/12/99; 1/15/99; 1/20/99; 1/22/99; 1/29/99

☐ CHANGE OF NAME ☐ ACCURATE TRANSLATION
☐ SECURITY ☐ MERGER ☐ OTHER:

EXECUTION DATE(S) ON THE DECLARATION IF FILED HERewith: (NOTE: IF DATES ON DECLARATION AND ASSIGNMENT DIFFER SEE ATTY!)

4.5 APPL. NO.(S) OR PAT NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached? ☐ YES ☐ NO

A. PAT. APP. NO.(S) series code/serial no.	M#	1 st INVENTOR if not in item 1	B. PATENT NO(S)	M#	1 st INVENTOR if not in item 1
09/215,257	256628				

5. Name & Address of Party to Whom Correspondence Concerning Document Should be Mailed:

Pillsbury Madison & Sutro LLP
Intellectual Property Group
1100 NEW YORK AVENUE, N.W.
NINTH FLOOR, EAST TOWER
WASHINGTON, D.C. 20005-3918

6. NUMBER INVOLVED:

APPLNS 1 + PATS _____ = TOTAL 1

7. AMOUNT OF FEE ENCLOSED: (Code 581)

ABOVE TOTAL x \$40 = \$40

5.5 ATTY DKT:

PMS 256628

8. IF ABOVE FEE IS MISSING OR INADEQUATE CHARGE
INSUFFICIENCY TO DEPOSIT ACCOUNT NUMBER: 03-3975

UNDER ORDER NO

20263

256628

MATTER NO.

CLIENT REF.

dup. sheet not required

CLIENT NO.

MATTER NO.

03/22/1999 DNGUYEN 00000278 09215257

01 EC:581 40.00 00

9. STATEMENT AND SIGNATURE.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

10. Total number of pages including this
cover sheet, attachments and document
(do not file dup. Cover sheet)

11

Gary Janjane Reg. No. 43,180

Signature

for Attorney: Paul N. Kokulis

Reg. No. 16773

Date: March 19, 1999

Atty/Sec: PNK/kep

TEL: (202) 861-3503

FAX: (202) 822-0944

FILE WITH PTO RETURN RECEIPT (PAT-103A)

Please return signed/recorded to:
Hillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt. PMS 256628
M#

Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;
- ☒ was filed on December 18, 1998, Appln. No. 09/ 215,257;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an
interest therein;

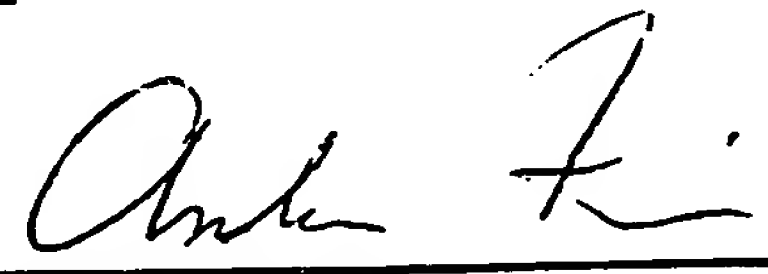

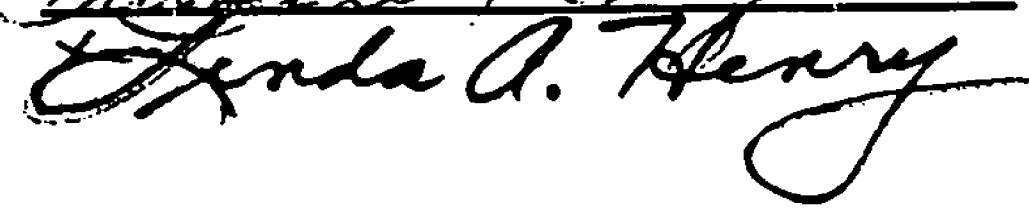
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

<u>Signature</u>	<u>Date Signed</u>	<u>Witness</u>
1) <u>x</u>  Name: Andrew Fire	<u>x</u> <u>11/15/99</u>	 
2) _____ Name: Si Q. Xu	_____	_____
3) _____ Name: Mary K. Montgomery	_____	_____
4) _____ Name: Stephen A. Kostas	_____	_____
5) _____ Name: Lisa Timmons	_____	_____

Please return signed/recorded to:
Pillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt.	PMS 256628	Client Ref.
	M#	

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) ~~St Q Xu~~ Sigun Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;
- ☒ was filed on December 18, 1998, Appln. No. 09/ 215,257;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐ Limited Partnership duly organized and existing under the laws of the District of Columbia and having its principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to the said invention in the United States and all foreign countries, as described in the aforesaid application, and to the said application and to all continuations, divisions, reissues and substitutes of said application, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1)

Name: Andrew Fire

2)

Name: Si Q. Xu
Siqun

X 1/12/99

X
X

Hui Shao

3)

Name: Mary K. Montgomery

4)

Name: Stephen A. Kostas

5)

Name: Lisa Timmons

Please return signed/recorded to:
Pillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt. PMS 256628

M#

Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;
- ☒ was filed on December 18, 1998, Appln. No. 09/ 215,257 ;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an
interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1)

Name: Andrew Fire

2)

Name: Si Q. Xu

3)

X Mary K. Montgomery
Name: Mary K. Montgomery

X 1/29/99

X Leticia Byrnes
X 1-29-99

4)

Name: Stephen A. Kostas

5)

Name: Lisa Timmons

Atty. Dkt. PMS 256628
M#

Client Ref.

Please return signed/recorded to:
Isbury Madison & Sutro LLP
Intellectual Property Group
10th Floor, East Tower
100 New York Avenue, N.W.
Washington, D.C. 20005-3918

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;

☒ was filed on December 18, 1998, Appln. No. 09/ 215,257;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an
interest therein;


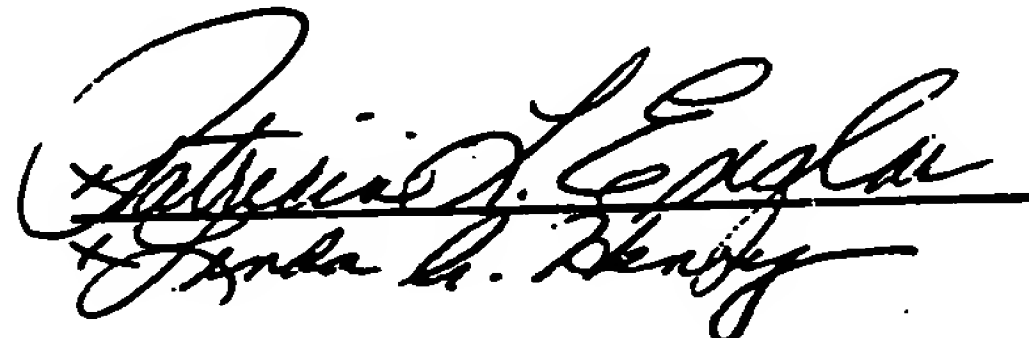

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

<u>Signature</u>	<u>Date Signed</u>	<u>Witness</u>
1) _____ Name: Andrew Fire	_____	_____
2) _____ Name: Si Q. Xu	_____	_____
3) _____ Name: Mary K. Montgomery	_____	_____
4) <u>x</u>  Name: Stephen A. Kostas	<u>x Jan. 20, 1999</u>	 
5) _____ Name: Lisa Timmons	_____	_____

Please return signed/recorded to:
Pillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt. PMS 256628

M#

Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628

and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;

☒ was filed on December 18, 1998, Appln. No. 09/ 215,257 ;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an
interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1)

Name: Andrew Fire

2)

Name: Si Q. Xu

3)

Name: Mary K. Montgomery

4)

Name: Stephen A. Kostas

5)

x Lisa D. Timmons
Name: Lisa Timmons

x 1/22/99

x Judith C. Salas
x

In re Patent of:

Andrew Z. FIRE *et al.*

U.S. Patent No.: 6,506,559

Application No.: 09/215,257

Filed: December 18, 1998

Issued: January 14, 2003

For: GENETIC INHIBITION BY
DOUBLE STRANDED RNA

**PETITION UNDER 37 C.F.R. § 1.183
TO WAIVE THE RULES UNDER
37 CFR §3.81(a)**

**** Hand-Carry To Office Of Petitions
Crystal Plaza 4, Room 3-C23 ****

Office of Petitions

Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED

JAN 22 2003

OFFICE OF PETITIONS

Sir:

This is a Petition under 37 C.F.R. § 1.183 to request that the requirements of 37 C.F.R. § 3.81(a) be waived to permit the correct names of the assignees of the above-mentioned patent to be provided after issuance of the patent. Accompanying this petition is a second petition requesting that the front page of the original Letters Patent be reprinted pursuant to 37 CFR §1.182 to reflect the correct names of the assignees. The original Letters Patent is surrendered herewith to facilitate reprinting of the first page.

On October 22, 2002, Applicant's agent submitted two copies of Issue Fee Transmittal Form PTOL-85B noting the sole assignee as "Carnegie Institute of Washington." This assignee designation was erroneous in two respects:

(1) A second assignment to “The University of Massachusetts” was recorded on March 19, 1999, at Reel/Frame 009825/0207 (copies of the Notice of Recordation and assignment documents are attached hereto); and

(2) “Carnegie Institute of Washington” contains an inadvertent error in that the word “Institute” should actually be “Institution” (see copies of Notice of Recordation and assignment attached hereto). Thus, the correct name of the first assignee should be “Carnegie Institution of Washington,” and “The University of Massachusetts” should be included on the face of the patent as the second assignee.

The failure to include the correct information pertinent to the assignment held by the University of Massachusetts was an inadvertent oversight, as was the misspelling of the assignee name that was indicated on the Issue Fee Transmittal document, PTOL-85B. The error was recognized immediately upon the PTO’s homepage posting of U.S. 6,506,559, and this petition and the accompanying petition under §1.182 have been filed immediately upon receipt of the original Letters Patent.

According to 37 CFR §1.183, in an extraordinary situation, when justice requires, any requirement of the regulations which is not a requirement of the statutes may be suspended or waived by the Commissioner or the Commissioner’s designee, or on petition of the interested party, subject to such other requirements as may be imposed. In the present case, justice requires that the correct assignees be named on the face of the patent, because the patent covers one of the most important inventions of the year, an invention that is jointly owned by Carnegie Institution of Washington and The University of Massachusetts. We anticipate high public interest in this patent and wish to insure that the public is immediately cognizant of the co-ownership of the patent. Further, we wish to avoid public reliance on incomplete assignment information. These goals can only be achieved by reprinting the front page of US 6,506,559 and correcting the information in the electronic databases that are available to the public.

To demonstrate the importance of the invention claimed in U.S. Patent No. 6,506,559, attached hereto are several scientific articles demonstrating the excitement of the biotechnology community towards the claimed technology. For instance, the attached article recently published by Science magazine (Vol. 298, Dec. 20, 2002) heralded the technology - which has been dubbed "RNA interference" - as the #1 scientific breakthrough of the year 2002. The article further notes how the true power of double-stranded RNA in the inhibition of gene expression was not appreciated until the work of Andrew Fire of the Carnegie Institution of Washington, Craig Mello of the University of Massachusetts and their colleagues (the inventors of U.S. 6,506,559) (see the paragraph bridging columns 1 and 2, page 2296).

The attached excerpt from the Aug. 6, 2002, edition of The Wall Street Journal also discusses how the work of Andrew Fire and Craig Mello (two of the inventors of U.S. Patent 6,506,559) "set off a flurry of activity, as it dawned on scientists that if gene-silencing was working in plants, and now in worms, it might be a general phenomenon in all animals." Indeed, as summarized in a recent Genetic Engineering News article (Vol. 22, Dec. 21, 2002), several companies have since been founded solely on the promise of RNA interference therapies (see the bottom of col. 1 on page 3), and several other companies are supplying RNA interference reagents and kits for using RNA interference to silence gene expression in virtually any cell line (see first textual column on page 80). The attached copy of the agenda for the conference entitled Applications of RNA Interference to take place on February 10-11, 2003, in San Diego, California, also demonstrates the high quantity of recent activity that has occurred in the area of RNA interference.

U.S. Patent No. 6,506,559 is the first issued U.S. patent to cover methods of inhibiting gene expression using double-stranded RNA. A substantial number of licensees have already


licensed the invention now patented in U.S. 6,506,559 based solely on the corresponding published PCT application. Furthermore, a substantial number of additional licenses are expected to be negotiated now that U.S. 6,506,559 has issued. Given the importance of the invention and the number of readers that will no doubt request a copy of the patent, it is only fair that both of the owners of this important invention are shown on the face of the patent. Listing the second assignee in a certificate of correction rather than on the face of the patent would not serve justice adequately, since the face of the patent would be viewed by potential readers much more frequently than a certificate attached to the patent. Failure to correct the face of the patent to reflect the names of both assignees would rob the second assignee of its due recognition as a co-owner of the invention, an injustice that should not prevail solely because the Applicant's agent made an inadvertent error in completing the PTOL-85 form.

The \$130.00 petition fee required by 37 C.F.R. § 1.17(h) is being submitted with this Petition. Applicants have also included payment of \$100.00 for placement of a certificate of correction in the archives as advised by the Petitions Branch. The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Deposit Account 50-0310.

RECEIVED
JAN 22 2003
OFFICE OF PETITIONS

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP


Bonnie Weiss McLeod, Ph.D.
Reg. No. 43,255

January 22, 2003

CUSTOMER NO.: 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: 202-739-3000
Facsimile: 202-739-3001

Attachments:

- Petition under 37 CFR §1.182 to Reprint the Front Page of the Letters Patent
- Notice of Assignment recordation and assignment for University of Massachusetts
- Notice of Assignment recordation and assignment for Carnegie Inst. of Washington
- Letters Patent
- Journal article: Science, Dec. 2002, Vol. 298, pages 2296-97
- Journal article: excerpt from The Wall Street Journal, Tuesday, Aug. 6, 2002
- Journal article: Genetic Engineering News, Dec. 2002, Vol. 22(21), pages 1, 3, 70 & 80
- Meeting agenda, Applications of RNA Interference, Feb. 10-11, San Diego, CA

Patent Assignment Abstract of Title

Total Assignments: 2

Application #: 09215257 **Filing Dt:** 12/18/1998 **Patent #:** 6506559 **Issue Dt:** 01/14/2003

PCT #: NONE

Publication #: NONE

Pub Dt:

Inventors: ANDREW Z. FIRE, SIQUN XU, MARY K. MONTGOMERY, STEPHEN A. KOSTAS, LISA TIMMONS, HIROAKI TABARA, SAMUEL E. DRIVER, CRAIG C. MELLO

Title: GENETIC INHIBITION BY DOUBLE-STRANDED RNA

Assignment: 1

Reel/Frame: 009825/0120 **Received:** 03/23/1999 **Recorded:** 03/19/1999 **Mailed:** 04/12/2000 **Pages:** 11

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: FIRE, ANDREW Z.

Exec Dt: 01/15/1999

XU, SIQUN

Exec Dt: 01/12/1999

MONTGOMERY, MARY K.

Exec Dt: 01/29/1999

KOSTAS, STEPHEN A.

Exec Dt: 01/20/1999

TIMMONS, LISA

Exec Dt: 01/22/1999

Assignee: CARNEGIE INSTITUTION OF WASHINGTON, THE

1530 P STREET, N.W.

WASHINGTON, DISTRICT OF COLUMBIA 20005

Correspondent: PILLSBURY MADISON & SUTRO LLP

PAUL N. KOKULIS

1100 NEW YORK AVENUE, N.W.

NINTH FLOOR, EAST TOWER

WASHINGTON, DC 20005-3918

Assignment: 2

Reel/Frame: 009825/0207 **Received:** 03/23/1999 **Recorded:** 03/19/1999 **Mailed:** 12/01/1999 **Pages:** 5

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: TABARA, HIROAKI

Exec Dt: 02/19/1999

DRIVER, SAMUEL E.

Exec Dt: 03/01/1999

MELLO, CRAIG C.

Exec Dt: 02/19/1999

Assignee: UNIVERSITY OF MASSACHUSETTS, THE

ONE BEACON STREET

BOSTON, MASSACHUSETTS 02108

Correspondent: PILLSBURY MADISON & SUTRO LLP

PAUL N. KOKULIS

1100 NEW YORK AVENUE, NW

9TH FLOOR, EAST TOWER

WASHINGTON, DC 20005-3918

Search Results as of: 9/3/2003 9:28:03 A.M.



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

NOVEMBER 29, 1999

PTAS

PILLSBURY MADISON & SUTRO LLP
PAUL N. KOKULIS
1100 NEW YORK AVENUE, N.W.
NINTH FLOOR, EAST TOWER
WASHINGTON, D.C. 20005-3918



101163112A

**CORRECTED
NOTICE**

**UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/19/1999

REEL/FRAME: 009825/0120

NUMBER OF PAGES: 11

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

FIRE, ANDREW Z.

DOC DATE: 01/15/1999

ASSIGNOR:

MONTGOMERY, MAY K.

DOC DATE: 01/29/1999

ASSIGNOR:

TIMMONS, LISA

DOC DATE: 01/22/1999

ASSIGNOR:

XU, SIQUN

DOC DATE: 01/12/1999

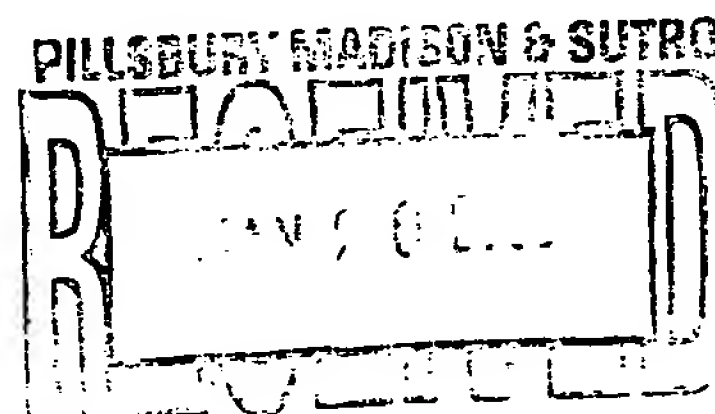
ASSIGNOR:

KOSTAS, STEPHEN A.

DOC DATE: 01/20/1999

ASSIGNEE:

CARNEGIE INSTITUTION OF
WASHINGTON, THE
1530 P STREET, N.W.
WASHINGTON, D.C. 20005



009825/0120 PAGE 2

SERIAL NUMBER: 09215257
PATENT NUMBER:

FILING DATE: 12/18/1998
ISSUE DATE:

JACQUELINE MOORE, PARALEGAL
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

NOVEMBER 19, 1999

PTAS

PILLSBURY MADISON & SUTRO LLP
PAUL N. KOKULIS
1100 NEW YORK AVENUE, NW
9TH FLOOR, EAST TOWER
WASHINGTON, DC 20005-3918



101162969A

**CORRECTED
NOTICE**

**UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/19/1999

REEL/FRAME: 009825/0207
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
TABARA, HIROAKI

RECEIVED

DOC DATE: 02/19/1999

ASSIGNOR:
DRIVER, SAMUEL E.

JAN 22 2003

DOC DATE: 03/01/1999

OFFICE OF PETITIONS

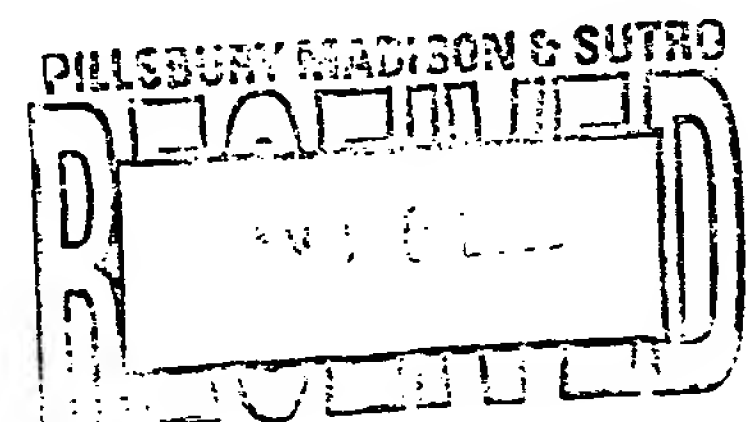
ASSIGNOR:
MELLO, CRAIG C.

DOC DATE: 02/19/1999

ASSIGNEE:
UNIVERSITY OF MASSACHUSETTS, THE
ONE BEACON STREET
BOSTON, MASSACHUSETTS 02108

SERIAL NUMBER: 09215257
PATENT NUMBER:

FILING DATE: 12/18/1998
ISSUE DATE:



009825/0207 PAGE 2

ANNE HARRELL, PARALEGAL
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS